

AN EVALUATION OF PAKISTANI CURRICULUM IMPLEMENTATION CHALLENGES AT SECONDARY AND HIGHER SECONDARY LEVELS: A STUDY OF CLASSES 9–12

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ABSTRACT

Curriculum is the central framework through which educational aims are translated into classroom teaching, learning activities, assessment practices, and student outcomes. At the secondary and higher secondary levels, especially in Classes 9, 10, 11, and 12, Curriculum implementation becomes highly important because students are preparing for board examinations, higher education, career selection, and future social participation.

However, the effectiveness of a curriculum depends not only on its official design but also on how successfully it is implemented in schools and classrooms. This paper evaluates major curriculum implementation challenges at secondary and higher secondary levels through a review-based research approach in Pakistan. The study focuses on teacher preparedness, curriculum overload, textbook dependency, and examination pressure, lack of resources, weak assessment alignment, student diversity, limited professional development, and administrative constraints. The paper argues that implementation gaps often appear when there is a mismatch between the intended curriculum, the taught curriculum, and the assessed curriculum. It further highlights that effective curriculum reform requires teacher training, flexible pedagogy, supportive school leadership, relevant textbooks, continuous assessment, and regular feedback-based curriculum review. The paper concludes that curriculum implementation in Classes 9–12 can be improved through practical teacher support, reduced content burden, improved assessment practices, technology integration, and stronger coordination among curriculum developers, textbook boards, teachers, school administrators, and examination bodies.

KEYWORDS: curriculum implementation, secondary education, higher secondary education, Classes 9–12, teacher training, assessment alignment and curriculum challenges.

1. INTRODUCTION

Curriculum is one of the most important foundations of any education system. It represents the knowledge, skills, values, attitudes, and competencies that society expects students to acquire through formal schooling. A curriculum is not limited to a syllabus or a textbook; rather, it includes learning objectives, teaching strategies, assessment methods, classroom activities, instructional materials, and expected learning outcomes. Tyler explained that curriculum development should begin with clear educational objectives, followed by the selection of learning experiences, organization of those experiences, and evaluation of outcomes [1]. Similarly, Taba emphasized that curriculum should be developed through a systematic process based on learners' needs, content selection, organization, and evaluation [2].

At the secondary and higher secondary levels, curriculum plays a particularly important role because students in Classes 9, 10, 11, and 12 are at a transitional stage of academic, personal, and career development. Classes 9 and 10 usually represent the secondary level, where students build foundational knowledge in subjects such as English, mathematics, science, social studies, Islamic studies, and computer science. Classes 11 and 12 represent the higher secondary level, where students move toward subject specialization in areas such as pre-medical, pre-engineering, humanities, commerce, and computer science. Therefore, curriculum implementation at these levels directly

affects students' examination performance, subject choices, career pathways, and readiness for higher education. However, the success of a curriculum depends on implementation. A well-designed curriculum may fail if teachers are not properly trained, textbooks do not match curriculum goals, assessment focuses only on memorization, classrooms lack resources, or students' learning needs are ignored. Fullan argues that educational change is complex because implementation depends on the beliefs, capacities, and working conditions of teachers and schools [7]. Curriculum reform cannot succeed simply by issuing new documents or textbooks; it requires deep classroom-level change.

In many education systems, a gap exists between the intended curriculum and the implemented curriculum. The intended curriculum refers to official curriculum documents and policy expectations. The implemented curriculum refers to what teachers actually teach in classrooms. The attained curriculum refers to what students actually learn. Van den Akker explains that curriculum quality depends on alignment among these levels [5]. When there is poor alignment, students may study content that is not connected to learning outcomes, teachers may focus only on examination preparation, and assessment may fail to measure higher-order thinking skills.

This paper evaluates curriculum implementation challenges at secondary and higher secondary levels, focusing on Classes 9–12. It explores why curriculum objectives are often difficult to achieve in real classroom conditions and what improvements are required for effective implementation.

2. Background of the Study

Curriculum implementation is the process of putting the official curriculum into practice in schools and classrooms. It includes lesson planning, teaching methods, use of textbooks and learning resources, classroom interaction, student engagement, assessment, feedback, and school supervision. Snyder, Bolin, and Zumwalt explain that curriculum implementation is not a mechanical process because teachers interpret and adapt curriculum according to their understanding, classroom context, students' abilities, and available resources [8].

At the Classes 9–12 level, curriculum implementation is influenced by several factors. First, these classes are usually linked with high-stakes board examinations. As a result, teachers and students often focus more on exam preparation than conceptual understanding. Second, the curriculum may contain too much content, making it difficult for teachers to complete the syllabus within the academic year. Third, many teachers may not receive sufficient professional development when curriculum changes are introduced. Fourth, schools may lack laboratories, libraries, digital tools, and teaching aids. Fifth, students come from diverse social, linguistic, and academic backgrounds, making uniform curriculum delivery difficult.

The secondary and higher secondary curriculum should ideally prepare students for academic success, responsible citizenship, employability, digital literacy, problem-solving, and lifelong learning. International curriculum literature increasingly emphasizes 21st-century skills, critical thinking, creativity, collaboration, communication, and ethical awareness [9]. However, traditional implementation practices often remain textbook-centered and examination-driven. This creates a challenge for curriculum reform because modern curriculum goals require student-centered teaching, while school systems may still reward memorization and reproduction of textbook content.

In the context of Classes 9–12, curriculum implementation also faces the challenge of subject specialization. Students in higher secondary classes often choose subject groups based on social pressure, limited counseling, or perceived career status rather than personal interest and ability. Therefore, curriculum at this stage should also provide career guidance, practical skills, and interdisciplinary learning. Without these elements, students may complete higher secondary education without clear academic or professional direction.

3. Statement of the Problem

The curriculum for Classes 9–12 is designed to develop students' subject knowledge, analytical ability, moral values, practical skills, and readiness for higher education. However, in many schools, curriculum implementation faces serious challenges. Teachers may rely heavily on textbooks and guidebooks, classroom teaching may focus on rote memorization, assessment may not measure conceptual understanding, and students may not receive sufficient opportunities for practical learning. There may also be a mismatch between curriculum objectives, textbook content, teaching strategies, and examination patterns.

The problem is not only the curriculum document itself but the gap between curriculum planning and classroom implementation. Curriculum reforms often fail when teachers are not included in decision-making, professional development is insufficient, resources are limited, and assessment systems remain unchanged. Therefore, it is necessary to evaluate curriculum implementation challenges at the secondary and higher secondary levels so that practical recommendations can be developed for improvement.

4. Objectives of the Study

The main objectives of this study are:

1. To examine major challenges in curriculum implementation at secondary and higher secondary levels.
2. To analyze the role of teachers, textbooks, assessment, and school resources in curriculum implementation.
3. To identify gaps between intended curriculum, taught curriculum, and assessed curriculum in Classes 9–12.
4. To explore how curriculum implementation affects students' learning, examination preparation, and skill development.
5. To suggest practical recommendations for improving curriculum implementation in Classes 9–12.

5. Research Questions

This study is guided by the following research questions:

1. What are the major curriculum implementation challenges at secondary and higher secondary levels?
2. How do teachers' professional preparation and classroom practices influence curriculum implementation?
3. To what extent are textbooks, teaching methods, and assessment practices aligned with curriculum objectives?
4. How does curriculum overload affect teaching and learning in Classes 9–12?
5. What strategies can improve curriculum implementation at secondary and higher secondary levels?

6. Significance of the Study

This study is significant for curriculum developers, teachers, school heads, policymakers, textbook writers, examination boards, and researchers. For curriculum developers, the study highlights the need to design realistic, relevant, and implementable curricula. For teachers, it identifies classroom-level challenges and emphasizes the importance of professional development. For school administrators, it shows the need for instructional leadership, supervision, and resource support. For examination boards, it stresses the importance of aligning assessment with curriculum goals. For researchers, the study provides a foundation for further empirical research on curriculum implementation in secondary and higher secondary education.

The study is also significant because Classes 9–12 represent a crucial stage in students' educational journey. Weak curriculum implementation at this level can negatively affect students' academic achievement, career choices, higher education readiness, and personal development. Therefore, improving curriculum implementation can contribute to better learning outcomes and a more effective education system.

7. REVIEW OF RELATED LITERATURE

7.1 Concept of Curriculum

Curriculum has been defined in different ways by different scholars. Traditional definitions view curriculum as a course of study or a list of subjects taught in school. Modern definitions are broader and include learning objectives, content, pedagogy, assessment, school culture, and learner experiences. Pinar, Reynolds, Slattery, and Taubman describe curriculum as a complex educational experience shaped by historical, social, cultural, and political contexts [4].

Tyler's model of curriculum development is one of the most influential models. It focuses on four basic questions: What educational purposes should the school seek to attain?

What learning experiences can help attain these purposes? How can these experiences be organized effectively? How can it be determined whether the purposes are being attained? [1]. Although Tyler's model is systematic, critics argue that curriculum implementation is more complex than a linear process.

Taba proposed a grassroots approach, suggesting that teachers should play a key role in curriculum development because they understand learners' needs and classroom realities [2]. Stenhouse also emphasized the teacher's role as a researcher and argued that curriculum should be tested and refined through classroom practice [3]. These views are highly relevant for Classes 9–12 because teachers are the main actors who translate curriculum documents into real learning experiences.

7.2 Intended, Implemented, and Attained Curriculum

A major concept in curriculum studies is the distinction between intended, implemented, and attained curriculum. The intended curriculum refers to the official curriculum designed by authorities. The implemented curriculum refers to what teachers actually teach. The attained curriculum refers to what students actually learn. Thijs and Van den Akker argue that curriculum quality depends on coherence among these dimensions [6].

In Classes 9–12, these three levels often differ. The official curriculum may emphasize critical thinking, conceptual understanding, practical work, and skill development.

However, the implemented curriculum may focus mainly on textbook explanation and exam preparation. The attained curriculum may then become limited to memorized answers rather than deep understanding. This gap creates a major implementation challenge.

7.3 Teacher Preparedness and Curriculum Implementation

Teachers are central to curriculum implementation. Even the best curriculum cannot be successful if teachers lack the knowledge, skills, motivation, and support needed to implement it. Shulman introduced the concept of pedagogical content knowledge, which refers to the teacher's ability to transform subject knowledge into teachable forms [11]. Ball, Thames, and Phelps further explain that effective teaching requires specialized content knowledge for teaching [12].

At secondary and higher secondary levels, teachers need both subject expertise and pedagogical competence. For example, a science teacher should not only know scientific concepts but should also know how to conduct experiments, ask inquiry-based questions, address misconceptions, and assess understanding. A mathematics teacher should not only solve problems but also help students understand mathematical reasoning. If teachers are trained only in content delivery, curriculum implementation becomes limited.

Professional development is also essential. Darling-Hammond, Hyler, and Gardner argue that effective teacher

professional development should be content-focused, collaborative, practice-based, sustained, and connected to classroom needs [13]. Guskey adds that teacher change occurs when professional development leads to visible improvement in student learning [14]. Therefore, one-time training workshops are usually insufficient for curriculum implementation.

7.4 Curriculum Overload

Curriculum overload is another major challenge. Curriculum overload occurs when too much content is included in the syllabus, leaving insufficient time for deep learning, discussion, projects, practical work, and revision. The OECD identifies curriculum overload as a common problem in many education systems [10]. When teachers face a heavy syllabus, they often rush through topics and focus on completing content rather than ensuring understanding.

In Classes 9–12, curriculum overload is especially serious because these classes are examination-oriented. Teachers may feel pressure to complete the syllabus before board examinations. Students may also rely on memorization because they have limited time to understand concepts deeply. Overloaded curriculum can reduce creativity, inquiry, and classroom interaction. It may also increase student stress and dependence on tuition or guidebooks.

7.5 Textbook Dependency

Textbooks are important curriculum resources, but excessive dependence on textbooks can narrow curriculum implementation. In many classrooms, the textbook becomes the curriculum. Teachers may follow textbook chapters line by line without connecting content to real-life situations, practical activities, or students' prior knowledge. Remillard explains that teachers' use of curriculum materials depends on their beliefs, knowledge, and classroom context [17].

For Classes 9–12, textbooks are often closely linked with examinations. Students may believe that only textbook content is important, while teachers may avoid additional learning activities because they fear wasting examination time. This limits the broader goals of curriculum, such as creativity, problem-solving, communication, and practical application. Textbooks should support curriculum objectives, but they should not replace teacher judgment and student-centered learning.

7.6 Assessment and Examination Pressure

Assessment is one of the strongest influences on curriculum implementation. Biggs argues that effective education requires constructive alignment among learning outcomes, teaching activities, and assessment tasks [15]. If the curriculum emphasizes critical thinking but examinations test memorized content, teachers and students will naturally focus on memorization.

Black and Wiliam show that formative assessment can significantly improve learning when teachers use assessment to provide feedback and adjust instruction [16]. However, in many secondary and higher secondary classrooms, assessment is mainly summative and examination-based. Students are judged through final papers, while classroom assessment, project work, oral communication, laboratory performance, and reflective tasks may receive limited attention.

Board examinations in Classes 9–12 often shape classroom priorities. If exam questions are predictable and textbook-based, teachers may train students to reproduce answers. This creates a mismatch between modern curriculum goals and traditional assessment practices. Curriculum implementation cannot improve without reforming assessment.

7.7 Resources and Learning Environment

Curriculum implementation requires adequate resources. Science curriculum requires laboratories, apparatus, chemicals, safety equipment, and practical time. Computer science curriculum requires computers, internet access, software, and technical support. Language curriculum requires reading materials, speaking activities, audio resources, and writing practice. Social science curriculum benefits from maps, charts, case studies, debates, and project work.

In many schools, especially under-resourced public schools, teachers may not have sufficient resources to implement curriculum effectively. Large class sizes, limited classrooms, weak internet access, lack of laboratories, and shortage of libraries create practical barriers. Hattie argues that effective learning depends not only on resources but also on how teachers use them [19]. However, when basic resources are absent, implementation becomes more difficult.

7.8 Student Diversity and Learning Needs

Students in Classes 9–12 differ in language background, prior achievement, socio-economic status, learning style, motivation, and future goals. A uniform curriculum may not address all learners equally. Inclusive curriculum implementation requires differentiated teaching, remedial support, enrichment activities, and flexible assessment. UNESCO emphasizes that curriculum should respond to learner diversity and support inclusive education [18].

In many classrooms, teachers face difficulty addressing diverse learning needs because of large class sizes and limited training. Some students may struggle with the language of instruction, especially when textbooks are written in English or formal academic language. Others may lack foundational skills from earlier grades. If

curriculum implementation does not address these differences, weaker students may fall behind and lose interest.

7.9 School Leadership and Supervision

School leadership plays an important role in curriculum implementation. Principals and head teachers influence school culture, timetable management, teacher collaboration, monitoring, and resource use. Elmore argues that instructional improvement requires internal accountability and professional capacity within schools [20]. If school leadership focuses only on administrative work and examination results, curriculum implementation may remain narrow.

Effective school leaders support teachers through lesson observation, feedback, professional learning communities, and resource planning. In Classes 9–12, leadership is especially important because board examination pressure can dominate school priorities. School heads must balance examination preparation with broader curriculum goals.

8. THEORETICAL AND CONCEPTUAL FRAMEWORK

This study is guided by curriculum implementation theory and constructive alignment theory. Curriculum implementation theory suggests that educational change depends on the interaction between policy, teachers, students, resources, school culture, and assessment. Fullan argues that reform succeeds when there is clarity, capacity building, ownership, and continuous support [7].

Constructive alignment theory, proposed by Biggs, states that learning outcomes, teaching methods, and assessment should be aligned [15]. In the context of Classes 9–12, this means that if the curriculum aims to develop critical thinking, teaching should include inquiry, discussion, problem-solving, and application tasks, while assessment should test reasoning rather than memorization.

The conceptual framework of this paper includes the following components:

1. **Curriculum design:** objectives, content, sequence, relevance, and workload.
2. **Teacher capacity:** subject knowledge, pedagogy, professional development, and motivation.
3. **Instructional resources:** textbooks, laboratories, libraries, technology, and teaching aids.
4. **Assessment alignment:** classroom assessment, board examinations, feedback, and learning outcomes.
5. **School environment:** leadership, class size, timetable, supervision, and academic culture.
6. **Student factors:** prior knowledge, language, motivation, socio-economic background, and career goals.
7. **Curriculum outcomes:** conceptual understanding, examination performance, skills, values, and readiness for higher education.

9. RESEARCH METHODOLOGY

This paper uses a qualitative review-based research design. The study is based on analysis of curriculum implementation literature, curriculum theories, policy documents, and secondary education research. The purpose is not to present original survey data but to evaluate commonly reported challenges and develop practical recommendations for Classes 9–12.

9.1 Research Design

The study follows a descriptive and analytical review design. It describes major implementation challenges and analyzes them through curriculum theories and educational research. This design is suitable because curriculum implementation is a complex issue involving teachers, students, school systems, textbooks, assessment, and policy.

9.2 Sources of Data

The study uses secondary sources, including books, journal articles, curriculum policy documents, reports from international organizations, and education research literature. Key areas reviewed include curriculum theory, teacher professional development, assessment alignment, curriculum overload, textbook use, educational change, and secondary education reform.

9.3 Method of Analysis

The study uses thematic analysis. The reviewed literature was organized into major themes such as teacher preparedness, curriculum overload, textbook dependency, assessment pressure, resource limitations, student diversity, and school leadership. These themes were then discussed in relation to Classes 9–12.

9.4 Scope of the Study

The study focuses on curriculum implementation at secondary and higher secondary levels, specifically Classes 9, 10, 11, and 12. It does not evaluate one specific subject curriculum only; rather, it examines general implementation challenges across subjects in Pakistan. The paper is suitable for adaptation to specific contexts such as public schools, private schools, science curriculum, English curriculum, Pakistan studies curriculum or mathematics curriculum.

9.5 Limitations of the Study

The main limitation of this study is that it is based on literature review and document analysis rather than original field data. Therefore, it does not include direct responses from teachers, students, or school administrators. Future research may use questionnaires, interviews, classroom observations, or textbook analysis to collect empirical data.

10. DISCUSSION: MAJOR CURRICULUM IMPLEMENTATION CHALLENGES

10.1 Gap Between Curriculum Policy and Classroom Reality

One of the major challenges is the gap between curriculum policy and classroom practice. Official curriculum documents may include modern aims such as creativity, critical thinking, inquiry, collaboration, and problem-solving. However, classroom teaching may remain lecture-based and textbook-centered. Spillane, Reiser, and Reimer argue that policy implementation depends on how teachers interpret policy messages [27]. If teachers do not fully understand the purpose of curriculum reform, implementation becomes superficial.

In Classes 9–12, teachers may continue old teaching methods even after curriculum revision. They may change lesson titles or textbooks but not classroom practices. This shows that curriculum implementation requires more than distributing new documents; it requires teacher orientation, classroom support, assessment reform, and monitoring.

10.2 Insufficient Teacher Training

Teachers are the key agents of curriculum implementation, yet they often receive limited training when a new curriculum is introduced. Training may be short, theoretical, and disconnected from classroom realities. Teachers may be told what has changed in the curriculum but not how to teach it. As a result, they may continue traditional methods.

For effective implementation, teachers need practical training in lesson planning, activity-based learning, formative assessment, differentiated instruction, technology integration, and subject-specific pedagogy. For example, science teachers need training in inquiry-based experiments; English teachers need training in communicative language teaching; mathematics teachers need training in conceptual problem-solving.

10.3 Examination-Oriented Teaching

High-stakes examinations strongly influence curriculum implementation in Classes 9–12. When students' academic future depends on board examination marks, teachers and students naturally focus on expected questions, past papers, and memorized answers. This can reduce the curriculum to examination preparation.

Examination-oriented teaching creates several problems. It discourages creativity, reduces classroom discussion, limits practical work, and increases student anxiety. It also affects teachers' professional judgment because teachers may avoid innovative methods that are not directly linked to exams. Assessment reform is therefore essential for curriculum reform.

10.4 Curriculum Overload and Time Pressure

Curriculum overload is a common challenge at secondary and higher secondary levels. When the syllabus contains too many topics, teachers rush to complete it. This reduces opportunities for revision, discussion, practical activities, and student-centered learning. Students may learn many topics superficially but fail to develop deep understanding.

Curriculum overload is especially problematic in Classes 9 and 10 because students study several compulsory subjects. In Classes 11 and 12, subject specialization may increase difficulty and pressure. A balanced curriculum should focus on essential concepts rather than excessive content. It should allow time for practice, projects, application, and assessment feedback.

10.5 Textbook-Centered Implementation

In many schools, teachers treat textbooks as the complete curriculum. This limits flexibility and creativity. Textbooks are useful, but curriculum implementation should also include activities, discussion, projects, experiments, digital resources, and real-life examples. If teachers only explain textbook paragraphs and ask students to memorize answers, curriculum goals remain unfulfilled.

Textbook-centered teaching also affects students' independent thinking. Students may become dependent on guidebooks and model answers. To improve implementation, textbooks should include learning outcomes, activities, formative questions, project tasks, and links with real-life situations. Teachers should also be trained to use textbooks as resources rather than as rigid scripts.

10.6 Weak Assessment Alignment

There is often a mismatch between curriculum objectives and assessment methods. A curriculum may aim to develop analytical thinking, but examinations may ask recall-based questions. A curriculum may emphasize communication skills, but assessment may focus only on written grammar exercises. A curriculum may include practical science, but laboratory work may receive little weight in final assessment.

Weak assessment alignment sends a confusing message to teachers and students. They may ignore curriculum goals that are not assessed. Therefore, assessment should measure the same learning outcomes that the curriculum

values. Board examinations should include conceptual questions, application-based tasks, practical skills, and problem-solving items.

10.7 Lack of Resources

Resource limitations create serious implementation barriers. Many schools lack science laboratories, computer labs, libraries, projectors, internet access, and teaching aids. Even when resources exist, they may be outdated or poorly maintained. Teachers may also lack training in using available resources effectively.

For Classes 9–12, resources are particularly important because subjects become more advanced. Science cannot be taught effectively without practical work. Computer science cannot be implemented properly without computers. Language learning requires reading and speaking opportunities. Without resources, teachers may rely on lectures and memorization.

10.8 Large Class Size

Large class size makes student-centered teaching difficult. Teachers may struggle to check students' work, conduct group activities, manage discipline, provide feedback, and address individual learning needs. In large classes, lecture-based teaching becomes the easiest method, even if it is not the most effective.

Classes 9–12 often have large enrollments, especially in public schools. This affects curriculum implementation because modern curricula require interaction, assessment, and active participation. Reducing class size may not always be possible, but teachers can be trained in group work, peer learning, and classroom management strategies for large classes.

10.9 Student Language and Foundational Learning Gaps

Many students enter Classes 9–12 with weak foundational skills in reading, writing, mathematics, or scientific reasoning. If the curriculum assumes higher readiness than students possess, implementation becomes difficult. Teachers may either slow down the syllabus or move forward while weaker students fall behind.

Language is also a major issue. Some students may understand concepts in their mother tongue but struggle with English or formal academic language. This is especially important in science, mathematics, and higher secondary subjects where technical vocabulary is used. Curriculum implementation should include language support, bridging activities, and remedial learning.

10.10 Limited Career Relevance

At higher secondary level, curriculum should prepare students for future academic and career pathways. However, students often study subjects without clear understanding of their practical relevance. Career counseling is limited in many schools. As a result, students may choose subject groups based on family pressure, social status, or misinformation.

Curriculum implementation should connect learning with real-life applications, higher education options, technical skills, and career opportunities. Classes 11 and 12 should include guidance about universities, vocational pathways, entrepreneurship, and employability skills.

10.11 Limited Teacher Participation in Curriculum Reform

Teachers are often expected to implement curriculum decisions made by others. When teachers are not involved in curriculum development or review, they may feel disconnected from reform. Priestley, Biesta, and Robinson emphasize teacher agency, which means teachers should be active curriculum makers rather than passive implementers [21].

Teacher participation improves curriculum relevance because teachers understand classroom realities. Curriculum review committees should include practicing teachers from different regions, school types, and subject areas. Their feedback can help reduce unrealistic content, improve textbooks, and align assessment with classroom practice.

Single National Curriculum 2020 is another step for the development of a single curriculum for every Pakistani which is also needed to be implemented. [22].

Weak Monitoring and Feedback Mechanisms

Curriculum implementation requires continuous monitoring and feedback. However, supervision often focuses on syllabus completion, attendance, and examination results rather than quality of teaching and learning. Classroom observation, teacher mentoring, and student feedback may be limited.

Effective monitoring should not be punitive. It should support teachers through constructive feedback, professional development, and resource provision. Schools should regularly review whether curriculum objectives are being achieved and what support teachers needed.

11. Recommendations

11.1 Strengthen Teacher Professional Development

Teachers should receive continuous, practical, and subject-specific professional development. Training should focus on classroom strategies, assessment methods, activity-based learning, technology use, and curriculum interpretation. Professional development should not be limited to one-time workshops; it should include follow-up

mentoring, peer collaboration, and classroom observation.

11.2 Align Curriculum, Textbooks, and Assessment

Curriculum objectives, textbooks, teaching methods, and examination papers should be aligned. If the curriculum emphasizes conceptual understanding and critical thinking, textbooks and assessments should reflect the same goals. Examination boards should include application-based and analytical questions rather than relying mainly on recall.

11.3 Reduce Curriculum Overload

Curriculum designers should review the content load in Classes 9–12 and identify essential learning outcomes. Repetition, unnecessary detail, and overly difficult content should be reduced. A focused curriculum allows teachers to teach deeply and students to understand meaningfully.

11.4 Improve Textbooks and Learning Materials

Textbooks should include clear learning outcomes, activities, examples, illustrations, formative assessment tasks, project ideas, and real-life applications. Supplementary digital resources should also be developed. Teachers should be encouraged to use textbooks flexibly rather than mechanically.

11.5 Reform Assessment Practices

Assessment should include formative assessment, project work, presentations, practical tasks, open-ended questions, and feedback. Board examinations should gradually shift from memorization-based questions to competency-based assessment. Teachers should be trained in designing classroom assessments that support learning.

11.6 Provide Adequate Resources

Schools should be provided with laboratories, libraries, digital tools, internet access, teaching aids, and subject-specific materials. Resource provision should be accompanied by teacher training so that materials are used effectively.

11.7 Support Students with Learning Gaps

Schools should introduce remedial classes, peer tutoring, language support, and diagnostic assessment. Teachers should identify students' learning difficulties early and provide support before they fall behind. Curriculum implementation should be inclusive and responsive to diverse learners.

11.8 Strengthen School Leadership

School heads should act as instructional leaders. They should support teachers, monitor classroom practices, encourage teamwork, and create a learning-focused school culture. Leadership training should include curriculum supervision, teacher mentoring, and data-based decision-making.

11.9 Include Career Guidance

Higher secondary curriculum implementation should include career counseling, subject selection guidance, university information, vocational awareness, and employability skills. Students should understand how their subjects connect with future opportunities.

11.10 Involve Teachers in Curriculum Review

Practicing teachers should be included in curriculum development and review processes. Their classroom experience can help make curriculum more realistic and implementable. Regular feedback from teachers and students should be used for curriculum improvement.

12. CONCLUSION

Curriculum implementation at secondary and higher secondary levels is a complex process that involves teachers, students, textbooks, assessments, resources, school leadership, and policy support. Classes 9, 10, 11, and 12 are especially important because they shape students' academic achievement, career choices, and readiness for higher education. However, curriculum implementation often faces serious challenges, including insufficient teacher training, curriculum overload, textbook dependency, examination pressure, lack of resources, weak assessment alignment, large class sizes, student learning gaps, and limited teacher participation in reform.

The paper has argued that the gap between intended curriculum, implemented curriculum, and attained curriculum is one of the central problems in Classes 9–12. Curriculum reform cannot succeed if it remains limited to documents and textbooks. It must be supported by teacher professional development, assessment reform, resource provision, school leadership, and continuous feedback. Effective curriculum implementation requires alignment among learning objectives, teaching methods, textbooks, classroom activities, and assessment systems. To improve curriculum implementation, education systems should reduce content overload, support teachers, reform examinations, provide resources, address student diversity, and involve teachers in curriculum decision-making.

A curriculum should not only prepare students for examinations but also develop critical thinking, communication, creativity, problem-solving, ethical values, digital literacy, and career readiness. Therefore, curriculum implementation at secondary and higher secondary levels should be treated as a continuous process of improvement rather than a one-time administrative activity.

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